**Cooperation IHE/ Capacity building start 1989**

One of the first joint project was the transfer of knowledge in what the Dutch had built over the years worldwide and the hundred year of local experiences in harsh conditions. What does this mean, no students travelling for courses to the NL but built up of knowledges centres in Yemen.

This goes back to **1987**, when the Rector of IHE, institute of Hydraulic Engineering, Prof. Wil Segeren, joined a Dutch sector review mission to Yemen, he noticed that many donor funded projects in the water and sanitation sector complained about the structural lack of higher technicians and academically trained professionals well, this was the start of a still continuing co-operation in the field of capacity building in the water sector between Yemen and the Netherlands, or more specific between the Sana’a University and IHE.

For those of you who don’t know IHE. IHE is since 1957 present in the developing world to support sector institutions like universities, ministries, research and training institutions in building up local capacity. In Yemen where the Sana’a University and the Faculty of Engineering (FOE), they were keen to identify an inter-institutional cooperation project with the aim at institutional strengthening of the FOE and improvement of its educational programme through cooperation with IHE.

As a result, a training project was formulated under the name of ‘Sana’a University Support” project or in short: **SUS I (1989-1992).** The main activity of SUS I was the design, organization and implementation of 6 post-graduate courses in Hydrology and Sanitary Engineering focusing on three different themes: Applied Hydrology (3 x), Advanced Hydrology and Water Management (1 x) and Sanitary Engineering (2 x). All together 106 staff members of various ministries and institutions actively participating in the implementation of the different projects were trained. By that time the involvement of the Sana’a University was marginal. In fact only their buildings and other facilities were used and assistance was given to the revision of the BSc curriculum of the Civil Engineering Department. It was clear that in order to address the need for more qualified staff structural measures were needed, since still no substantial in-country education programme in water and environmental engineering existed.

Wim Spaans a lecturer was the pioneer and told me how he started in an office without windows where he managed to get some plastic and started teaching with his car outside with a flat tire when a assistant came with a bicycle pump to repair. Both sides were eager to make it a success!

Preparations were made for the start-up of a second phase, besides further strengthening of the BSc curriculum and training of the University staff. During SUS II (1992-1997) emphasis was shifted to capacity building within DWEE through enrolment of junior staff in PhD programmes and to the preparation and organization of the first in-country Diploma/MSc programme in Water and Environmental Engineering. One of the milestones was the start of the first the first 2-year Diploma/MSc course in October 1994. A group of 12 participants finalised the Diploma course and 5 out of them continued for the second year MSc follow-up. At the same time a start was made with a framework for applied research.

At the end of the project in 1997 Prof. Dr. Mohammed Al-Eryani, head of the newly established Division of Water and Environmental Engineering (DWEE) and IHE faced a serious dilemma: whether or not, and if so: how to continue. There was still a great lack of staff and the available staff was fully occupied with their teaching and guidance of the BSc and MSc programmes. Moreover, their commitment was strongly affected by a continuous reduction of income due to inflation (1989: US$ 1800/month, 1997: US$ 180/month). IHE concluded that we had to consolidate the achievements in the educational and research programmes and that therefore the period until full staffing was reached, meaning after return of the PhD candidates, had to be bridged. But at the same time, IHE became convinced that they had to invent a way to develop a system of incentives to retain the academic staff by creating a stimulating and sustainable scientific environment. As a result, the idea of establishing the Water and Environment Centre (WEC) was born. It was a revolutionary development in the history of the University but IHE could convince the presidentship of the University that was the only solution to re-establish a stimulating scientific environment by supplementing the income of the academic staff, and thus to bind these staff to the university (instead of to their own private business) and to secure the sustainability of the project achievements.

The establishment of the WEC had become the main focus of the SUS III project (1997-2001), next to a further consolidation of and a complete transfer of responsibilities to the Division of Water and Environmental Engineering (DWEE) towards a stage of self-sufficiency.

Making an analysis of the history of the different SUS projects the following figure is illustrative for a process of capacity building. However, it was still only one part of it. In SUS I the International

Capacity Builder was directly involved in the training of the sector staff. During SUS II a start was made to support the local Capacity Builder. With the establishment of the WEC under SUS III in fact an intermediate institution was created to even better address the immediate needs of the sector. That the project ambitions were high but realistic, can be concluded from the success of the first year of the WEC. Four tailor made training courses were given for NWRA staff and research and studies were implemented for IWACO (water quality study), the World Bank (Sana’a Basin Water Management Project) and for GTZ (evaluation of a human resources development project). And the future is bright.

The WEC can be regarded as an example of an institution according to the new paradigm for universities and it can play a vital role in generating relevant knowledge through research in co-operation with the sector and to disseminate knowledge to the knowledge workers in the sector institutions through its training activities. The WEC turned out to be the ideal institution to initiate the process of improvement of the performance of the water and environmental sector institutions. Till to date, the cooperation still exists.

IHE and the sector benefited greatly from the studies done simultaneously in Yemen by TNO, Jac vd Gun was here the pioneer. I must say, and it gives such an inspiration to talk to those experts who all talk so positive and pleasant about the way they cooperated.

Now what shows the NL approach in the Yemeni context is to build local capacities, unlike to sending students for courses, look for innovative ways to introduce organisations as WEC.

Up till 2020 the cooperation with WEC still exist through NUFFIC. The Netherlands Embassy over the years always was represented in the WEC board until the departure of the Embassy staff.

Job Kleijn with data from IHE